ANNUAL REPORT

ON THE

HEALTH

OF THE

BOROUGH OF BRIGHOUSE,

For the Year 1893,

BY

MEREDITH YOUNG, M.B., C.M. (EDIN.),

MEDICAL OFFICER OF HEALTH;

Fellow of the Incorporated Society of Medical Officers of Health;

Fellow of the British Institute of Public Health, &c.

BRIGHOUSE:

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BOROUGH OF BRIGHOUSE.

SANITARY COMMITTEE.

Mayor:

ALDERMAN WILLIAM SMITH.

Chairman:

COUNCILLOR WILLIAM PILLING.

Vice-Chairman:

COUNCILLOR WILLIAM CAMM.

Members:

ALDERMAN KERSHAW.	COUNCILLOR FAIRBURN.
,, MILNES.	,, GANSON.
,, ROBINSON.	,, GRANDAGE.
,, SHEPHERD.	,, HALL.
,, SUGDEN.	,, G. HEALEY.
COUNCILLOR ASPINALL.	,, W. HEALEY.
,, BOTTOMLEY.	,, HELLIWELL.
,, BUTTERWORTH.	,, HOLMES.
,, CARTER.	,, INMAN.
,, A. T. CLAY.	,, JESSOP.
,, DYSON.	,, MILLER.

INTRODUCTION.

PUBLIC OFFICES, BRIGHOUSE,

JAN. 24TH, 1894.

To the Chairman and Members of the Sanitary Committee of the Town Council of Brighouse.

GENTLEMEN,

Herewith I beg to present to you my Annual Report on the Health of your Borough for the year 1893.

Amongst the facts therein submitted for your consideration you will find the questions of Infant Mortality and the spread of Scarlet Fever the most noteworthy. In connection with the latter I have called your attention to the urgent need for immediate Hospital provision, the consideration of which question, I feel sure, will not suffer in your hands.

In the Appendix and embodied in the Report you will find the usual tables of Deaths, Population, Births and new cases of Infectious Sickness, as well as several other Tables which I have constructed to to illustrate various points dwelt on in the text of the Report.

In the Report, in several places, you will find recommendations or suggestions made for the remedy of some state of affairs specially commented upon : as it is a very common thing for such suggestions made in an Annual Report to pass gradually into oblivion, I should like to ask your Committee to devote some Meeting or part of a Meeting to the consideration of these suggestions, and come to a definite conclusion on them, so that where practicable they may pass into actualities.

I thank you heartily for the assistance and support you have given me in the discharge of my duties during the year.

I have the honour to be, Gentlemen,

Your obedient servant,

MEREDITH YOUNG.

BOROUGH OF BRIGHOUSE.

MEDICAL OFFICER'S ANNUAL REPORT.

Population.—At the Census of 1881 this was 16,909 (Brighouse 7962, Rastrick 8038, and Hove Edge 909), and at the Census of 1891 it was 20,666 (Brighouse 10,276, Rastrick 9279, and Hove Edge 1111). Estimating it to the middle of 1893, I have calculated that it is 21,630 (Brighouse 10,610, Rastrick 9583, and Hove Edge 1437). An estimation of the population of the different Wards, but necessarily only a rough one and based on the assumption that there are on an average five persons to each inhabited house, is given hereunder. This is for the year 1891.

Hove Edge,	1049	Central,	3456
North,	1596	West,	3890
Calder,	2759	East,	2080
Bonegate,	3921	South,	1915

Previously, in the case of Brighouse, the population of intercensal years had been calculated on the assumption that the annual increase of population was constant in each year of the decade; this method was fallacious in precisely the same way as it is fallacious to imagine that the same result will accrue from simple as from compound interest. To put it more plainly, there was no allowance made for the fact that the number of persons arriving at years when marriage is possible increases year by year; the increase of capital by the addition of interest to principal was not taken into account. Thus the population was often under-estimated, and the birth and death rates over-estimated. This I have corrected, estimating the population for this year by the method of the Registrar-General on the principles of logarithms. As we are not yet far removed from the census year, I think the statistics may be taken as a fairly accurate guage of the sanitary state of the District.

Density.—The mean population on each square mile in Brighouse would be 16,442, and the mean area to each person 0·039 acres or 188 square yards. Putting it in another form, there are 25 persons to the acre. In Rastrick the mean population per square mile is 4335, and in Hove Edge 1580, the mean area per person being 0·147 acres (711 square yards) and 0·4 acres (1936 square yards) respectively.

Taking the Borough as a whole, the figures run as under :—

Persons per square mile	5947
Mean area per person, 0·107 acres, or 518 square yards.	
Persons per acre	9·3 (really 9·29).

These calculations are based on the populations of the constituent parts of the Borough at the Census of 1891.

Taking the West Riding of Yorkshire as a whole, also at the Census of 1891, the number of persons per square mile was 891, and the mean area per person 0·72 acres (nearly 0·718 to be more accurrate) or 3484 square yards.

Thus Brighouse is a very dense area indeed, Rastrick and Hove Edge being in this respect good. The evils of crowded areas are shewn generally by the way in which autumnal diarrhœa, phthisis, and infectious diseases generally are propagated, being aided not only by the closer contact of individuals, but by the increased fouling of the air and soil around the dwellings. Infant mortality is also specially affected by the density of any given area, and in my remarks on this you will find some comment on the relation between it and the density of the localities, though, of course, the estimation of the density in that particular connection has only been a roughly approximate one. I hope shortly to obtain accurately by census the populations of the most crowded areas in the constituent districts of the Borough, and to be able to devise some means for their mitigation.

Marriages.—I have been unable to obtain any returns of these, which are highly important in a report of this nature, the marriage-rate being, as Dr. Farr has termed it, "the barometer of prosperity" of a district; but I hope to be able to obtain them during the course of the year.

Births.—During the year these have numbered 594, namely, 306 of males and 288 of females, or at the rate of 27·4 per thousand per annum of the estimated population. In the three districts they have been as under:—

	Population 1893.	No. of Births.	Birth-rate.
Brighouse ...	10,610	286	26·9
Rastrick ...	9,583	276	28·8
Hove Edge..	1,437	—	—

The rate for Brighouse is slightly higher than that of 1892, but is rather lower than the average birth-rate of the last five years, which was 30·5; as in most cases these were over-estimated, I do not regard the deterioration as worthy of consideration. That for Rastrick is also slightly higher than the rate of 1892, but is slightly lower than the average of the last five years, which was 30·1. I am unable to obtain separate statistics on this point for Hove Edge this year. The illegitimate births are only distinguished by the Registrar for the sub-district of Rastrick, and in that district they amount to eleven.

Deaths.—During the year there have been 374 deaths registered from all causes, namely 189 of males and 185 of females, or at the rate of 17·2 per thousand of the estimated population. These deaths have been distributed as follows:—

	Total Deaths.	Rate per 1000 per annum.
Brighouse	194	18·2
Rastrick	159	16·5
Hove Edge	21	14·6

To these totals must be added 2 deaths which took place in the Brighouse and District Joint Hospital, one being that of a Brighouse resident, and one of a Rastrick resident. The totals then become 195 for Brighouse and 160 for Rastrick, and the corresponding rates 18·3 and 16·6 respectively, whilst the Borough rate becomes 17·3. In connection with this I ought also to say that in all probability some of the deaths in Brighouse ought really to be credited to Hove Edge, so that the Brighouse rate would be lower and the Hove Edge rate higher in a slight degree.

TABLE SHEWING THE POPULATION OF BRIGHOUSE, AND THE NUMBER OF BIRTHS AND DEATHS FOR THE TEN YEARS 1883 TO 1892 INCLUSIVE, AND FOR THE YEAR 1893; ALSO THE BIRTH AND DEATH RATES IN THESE YEARS.

YEAR.	POPULATION.	BIRTHS.		DEATHS.	
		Number of Births.	Rate per 1000 per annum.	Number of Deaths.	Rate per 1000 per annum.
1883	8,280	280	33·8	152	18·3
1884	8,340	289	34·6	179	21·4
1885	8,505	292	34·3	199	23·3
1886	8,700	260	29·8	185	21·2
1887	8,780	304	34·6	169	19·2
1888	8,880	301	33·9	139	15·6
1889	9,100	279	30·6	155	17·0
1890	9,220	275	29·8	201	21·8
1891	10,333	321	31·7	199	19·2
1892	10,507	282	26·8	199	18·9
Average for above Ten years.		288	32·0	177	19·6
1893	10,610	286	26·9	194	18·2

TABLE SHEWING THE POPULATION OF RASTRICK, AND THE NUMBER OF BIRTHS AND DEATHS FOR THE TEN YEARS 1883 TO 1892 INCLUSIVE, AND FOR THE YEAR 1893; ALSO THE BIRTH AND DEATH RATES IN THESE YEARS.

YEAR.	POPULATION.	BIRTHS.		DEATHS.	
		Number of Births.	Rate per 1000 per Annum.	Number of Deaths.	Rate per 1000 per annum.
1883	8,465	280	33·0	167	19·7
1884	8,680	290	33·4	222	25·5
1885	8,825	306	34·6	159	18·0
1886	8,950	268	29·9	178	20·7
1887	9,075	293	33·3	179	19·7
1888	9,592	285	30·7	159	16·6
1889	9,865	276	30·0	180	18·5
1890	9,981	280	28·1	164	16·4
1891	9,279	311	33·4	212	22·9
1892	9,448	270	28·5	172	18·2
Average for above Ten years.		286	31·5	179	19·6
1893	9,583	276	28·8	159	16·5

Thus, in the case of Brighouse, taking the average of the ten years 1883 to 1892 inclusive, we find that though the birth-rate of 1893 is lower, the death-rate is also lower, and, indeed, is lower than in any of the ten years alluded to with the exception of 1888 and 1889. In Rastrick the birth-rate is lower than the ten years' average, but the death-rate is extremely favourable, being considerably lower than the average of the ten years taken, and lower than that of any year in the previous decade except 1890.

Classification of Deaths according to Age.—

(a) Under 1 Year.—There have been 106 deaths of children under one year of age in the Borough during the year, or at the rate of 178 per thousand births. To this total Brighouse has contributed 58, Rastrick 40, and Hove Edge 8. This shews in the case of Brighouse a notable increase on past years, which is made the subject of special consideration further on in this Report.

(b) 1 and under 5 Years.—The records of this column are not so appalling, but taking it in conjunction with the last column, we have a total of 159 deaths of children under five years of age —almost one half of the total deaths. Of these 159 deaths, scarlet fever has claimed 15 victims, diarrhœa 11, chest diseases 35, and whooping cough 3.

(c) 25 and under 65.—Nothing calls for comment until we arrive at this group—the period of usefulness practically. Here again we have a large death-roll, though, it must be remembered, this age-group embraces 40 years. There are recorded 114 deaths of persons at ages between 25 and 65—in Brighouse 50 deaths, in Rastrick 59, and in Hove Edge 5. The chief causes of these deaths have been chest diseases, phthisis, heart disease and cancer, which last is returned as the cause of 7 deaths in this age-group and 5 in the next (65 and upwards).

(d) 65 and upwards.—In this group we have registered 64 deaths. This is fairly favourable, indicating a large proportion of people who have reached the age of 65 at least.

I should like here to enter a protest against the use of the term "senile decay" in the certification of deaths; it is very vague and harmful, because it states no definite cause of death, but only a kind of general cause; the only plea for its use is practically "the custom of the trade," but I should like to see its use discontinued, and some definite cause of death substituted.

Uncertified Deaths.—These have numbered 22 in the whole of the Borough, viz., 13 in Brighouse and 9 in Rastrick; that is, 5·8 per cent. of the deaths that took place were not certified—a highly unsatisfactory state of things.

Suicides.—There has been one suicide in the Borough district during the year.

Inquests.—These have numbered six during the year, so far as I can ascertain; to put it in another way, an inquest was held on 16 out of every thousand bodies of persons that died within the Borough.

ANALYSIS OF CAUSES OF DEATH.

1. Zymotic Diseases.—In this category the following are included:—Smallpox, measles, scarlet fever, diphtheria, whooping cough, fever (typhus, typhoid or enteric, and continued) and diarrhœa. The total deaths from these diseases are as in the following table:—

DISEASE.	Brighouse.	Rastrick.	HoveEdge.	Borough.
Smallpox	1	1	—	2
Scarlet Fever ...	19	4	1	24
Diphtheria... ...	1	1	—	2
Whooping Cough...	1	2	—	3
Typhoid Fever ...	—	1	—	1
Continued Fever ...	—	—	1	1
Diarrhœa	9	5	1	15
Total	31	14	3	48
Zymotic Death Rate	2·9	1·4	2·0	2·2

As all cases of small-pox occurring in the district were removed to the Brighouse and District Joint Hospital, the deaths which took place are credited, owing to registration, to Clifton ; but I have applied the necessary correction for deaths of residents dying outside the district, in the above Table.

In Brighouse the zymotic death-rate in 1892 was 4·5, but the difference is referable to the epidemics of smallpox and measles which overran the township then. In Rastrick it was 3·5, being higher owing to the same causes.

Hove Edge shews a zymotic death-rate almost identical with that of Rastrick, though the number of deaths from zymotic diseases was only three.

Smallpox.—The epidemic of smallpox which invaded your district in the early part of 1892, continued to start up in various parts until the 12th of June, when the last case was admitted into the Hospital at Clifton. Brighouse, from its position on the lines of traffic and from its floating population of the lodging-houses, suffered worst, there being 20 cases notified in it, whilst Rastrick has only had three cases, and Hove Edge none. All these cases were removed to the Hospital at Clifton, and the usual precautions of disinfection, quarantine, &c., thoroughly carried out. Re-vaccination or vaccination was in every case strongly advised by me, and it is with feelings of gratification that I can inform you that in only a very few isolated instances did I fail to effect it by moral suasion and argument. In all I vaccinated 54 persons in your district during the fore part of the year, and in many cases I have spent an hour or more in setting the pros and cons of the matter before the people and arguing with them on the vaccination question. The type of the epidemic was mild throughout, but was interrupted by the occurrence of two hæmorrhagic cases, one of which died on the seventh day after admission, the other recovering after a very severe and prolonged illness, his stay in the Hospital being exactly 99 days (from April 23rd to July 31st). I intend shortly to publish a full description of the latter case, as its occurrence is of extreme rarity. In reference to the two deaths from this disease I may quote the following particulars :—

1. Male ; 59 years of age ; previous health good ; vaccinated in infancy according to his own and his relatives' evidence—no scars visible (as was to have been expected almost at his age) ; nature of attack—hæmorrhagic vesicular ; death on tenth day of disease ; family history good ; rather intemperate.
2. Female ; aged 40 ; previous health very poor—had suffered from bronchial asthma for years, and heart was secondarily affected ; vaccinated in infancy only—one scar visible, measuring $\frac{1}{2}$in. square and foveated ; nature of attack—semi-confluent ; spots never became properly pustular ; death on fourteenth day of disease ; family history good ; temperate.

Of the total cases 14 were males and 9 females ; 20 were vaccinated and 2 were unvaccinated, whilst one case was dubious, no scars being visible and no clear evidence either way being obtainable. Two cases admitted to Hospital had been re-vaccinated, one of them eight days before the spots appeared (on the sixth day of incubation), and the other, strange to say, eighteen days before the spots appeared. The first case developed four abortive spots, and only stayed four days in Hospital ; the second, in which I was tempted to diagnose generalised vaccinia, or as one might call it in plain language, a slight rash following the vaccination, developed three spots and stayed seven days in

Hospital. The diagnosis proved correct, as the papules all developed into umbilicated vesicles, the contents of which became slightly opaque and then dried up into hard brown tenacious scabs. I append, in a tabular form, the leading particulars of the cases, the figures being too small for any percentage calculations :—

TABLE OF SMALLPOX CASES, 1893.

BRIGHOUSE.

No.	Sex.	Age.	Vaccination.	Nature of Attack	Duration of Stay in Hospital.	Result.
1	F.	49	3 scars, medium, foveated.	Very mild.	14 days	Recov'ry
2	M.	59	No scars visible.	Hæmorrhagic.		Death on 10th day.
3	F.	27	Re-vaccinated 8 days before.	Four spots.	4 days	Recov'ry
4	M.	30	1 large, not foveated.	Mild.	15 days	,,
5	M.	18	Re-vaccinated 18 days before.	Three spots.	7 days	,,
6	M.	19	3 very large and well foveated.	Mild.	15 days	,,
7	M.	26	Dubious.	Mild.	11 days	,,
8	M.	6	Vaccinated twice, not taken.	Fairly mild.	38 days	,,
9	M.	53	4 large foveated scars.	Fairly mild.	22 days	,,
10	F.	4	Unvaccinated.	Numerous spots.	33 days	,,
11	M.	45	2 small scars, slightly foveated.	Hæmorrhagic.	99 days	,,
12	M.	32	3 medium, slightly foveated.	Mild.	14 days	,,
13	M.	22	3 medium, not foveated.	Mild.	16 days	,,
14	M.	25	3 very small, not foveated.	Semi-confluent.	23 days	,,
15	F.	8 m.	Vaccinated 10 days before.	Large number of abortive papules.	13 days	,,
16	M.	3½	Vaccinated 20 days before.	20 - 25 spots, never in bed.	22 days	,,
17	M.	39	1 medium, slightly foveated.	Numerous discrete.	23 days	,,
18	F.	3	Unvaccinated.	Extremely mild.	8 days	,,
19	M.	51	4 small & 1 medium, none foveated.	Numerous discrete.	16 days	,,
20	F.	16	1 large and well foveated, 1 medium, foveated.	Badly discrete.	30 days	,,

RASTRICK.

1	F.	40	1 medium, foveated.	Semi-confluent.		Death on 14th day of disease
2	F.	21	Distinct evidence vaccination infancy; nothing visible.	Mild.	20 days	Recov'ry
3	F.	28	2 large and well foveated.	Discrete.	18 days	,,

HOVE EDGE.—None.

As I have a Report on the whole of the cases of Smallpox in the Hospital districts in course of preparation, I will not make any further comment on this disease.

Chickenpox.—In the fore part of the year this was rather prevalent, as is very often found after or during the latter part of an epidemic of Smallpox, and this added greatly to the difficulty of diagnosis of Smallpox, especially as at this time the type of the latter disease was mild. Several cases of it were notified to me as Smallpox, but on visiting them and consulting with the Practitioners who had notified them, we avoided the unpleasant results which would have occurred had they been admitted into the Hospital. And though as a rule it is a mild enough disease, there are times when it assumes a fatal form, and I discovered a few days ago, in an old book, that in 1888 a death was registered from this cause in Brighouse.

Scarlet Fever.—During the year the epidemic of Scarlet Fever, which had been prevalent during the previous year, had to be grappled with. In the absence of isolation accommodation this proved a very difficult and tedious work, as the following account will shew. In all, there were 153 cases notified in Brighouse during the year, 83 cases in Rastrick, and 3 in Hove Edge, making a total of 239 cases. As regards the *seasonal prevalence* of the disease, the cases occurred as follows:

	BRIGHOUSE.		RASTRICK.		HOVE EDGE.		BOROUGH.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
January	11	1	18	1	—	—	29	2
Feby. ...	27	5	13	—	—	—	40	5
March...	15	3	8	—	—	—	23	3
April ...	19	5	6	2	—	—	25	7
May ...	35	1	17	1	1	—	53	2
June ...	19	2	12	—	2	1	33	3
July ...	3	—	7	—	—	—	10	—
August .	7	—	—	—	—	—	7	—
Septem.	11	1	—	—	—	—	11	1
October	2	1	—	—	—	—	2	1
Novem.	3	—	2	—	—	—	5	—
Decem..	1	—	—	—	—	—	1	—
Totals...	153	19	83	4	3	1	239	24

From this table it will be seen that the epidemic has scarcely followed the usual seasonal curve, which sinks to a minimum in March and April, and then rises steadily to a maximum in October. In my own opinion there is a slight decrease observable in March and April; and

when the curve should have again risen, there were only very few susceptible persons left ; in other words, the seasonal wave was swallowed up and merged in the epidemic wave. A very perceptible rise is noticeable in the Brighouse cases in May. I had up to then made no special report to the Sanitary Committee of the Brighouse Local Board, because it was only the continuation of an epidemic which had been made the subject of a Special Report by Dr. Britton ; but the alarming increase caused me to direct the above Committee's attention to it, and every extra sail was clapped on, with the result that in June the number of cases had fallen to 19, and in July to 3, after which it diminished steadily, and in December only one case was notified.

The epidemic spread by means of house-to-house infection, aided by School infection in some cases. An epidemic of this nature is, to put it plainly, one which there is no excuse for ; it would not have reached one-fourth of its dimensions had we been able to bring proper measures to bear on it.

Again, the number of cases in children over five years of age points in the same direction ; children from one to five years of age are more susceptible to the poison of Scarlet Fever every year of their age from 1 to 5 years ; after that age not only does the susceptibility decrease every year, but the risk of a fatal attack diminishes. Hence for every year after the age of 5 that a child escapes Scarlet Fever, there is something saved—a doctor's bill or a child's life. The opposite idea is the one I have found to be prevalent, viz., the fatalistic notion that "if a child is to have it, the sooner he has it and gets over it the better." I trust this last epidemic will be a lesson to many parents and will crush out that foolish and barbarous notion.

During the first and second quarters of the year the type of disease was severe, and in all there were 22 deaths during these first six months. In Brighouse 9 out of the 17 deaths which this district contributed to the above total were returned with "convulsions" certified as the secondary cause of death. I do not say that post-scarlatinal nephritis (inflammation of the kidneys), from which these convulsions arise, is entirely avertible by proper management, for the poison of scarlatina itself exerts a baneful influence on the kidneys : but this I do assert—that in many cases of scarlet fever, many parents, through ignorance, encourage this complication.

Labouring under the delusion either that scarlatina is only a mild form of scarlet fever, or more commonly that as soon as the rash has disappeared the disease is at an end, they commence a system of strengthening the patient, and administer all kinds of nitrogenous food in absurd quantities—beef-tea, eggs, meat, etc. The kidneys being in a delicate state, the least additional work thrown upon them, combined perhaps with a chill from allowing a child to sit on the cold doorstep and "get some fresh air," serves to light up an inflammation which terminates often in convulsions, from the fact that the kidneys are unable to throw off the excretory products which then remain in the blood and poison the nervous system.

In May, as I have casually mentioned before, owing to the rapid spread of the disease I made a Special Report to the Sanitary Committee of the Brighouse Local Board, giving a short description of the epidemic and the localities affected, and recommended the following, amongst other, precautions :—

1. The rigorous exclusion of *all* the children of an infected household from school for a period of at least 6 weeks.
2. The disinfection of all the Schools in the Brighouse district at each week-end as a matter of routine, whether scarlatina or anything or nothing else were prevalent.

The sanction of the School Managers which was necessary for this step was most cordially acceded.

The first precaution—quarantine of *all* the children in the house for 6 weeks, and in many cases for two or three months on a second or third case appearing, would not have been necessary had Hospital isolation and subsequent disinfection, etc., been available; in that case a quarantine of one week at most would have sufficed. But the meaning of isolation is not understood by one out of every hundred inhabitants: and in scarlet fever, where infection is given off from the very first commencement of the disease for a period of six weeks or more, and in which it is sometimes difficult for a medical man to say when the possibility of infection has ceased, it can readily be understood that efficient isolation is impossible except in an Infectious Diseases Hospital, itself isolated, under the superintendence of a medical man.

I should recommend your Council to adopt the plan of having printed handbills giving plain instructions as to the precautions to be observed by patients in any case of infectious disease—instructions I mean as to isolation of the patient and the preparation of the room, disinfection of various articles, cleanliness, etc., and also shewing those responsible their duties under the Public Health Act, and Infectious Diseases Notification and Prevention Acts, and the penalties for contravention of these Acts. These handbills could be left at each affected house on our visits, and the knowledge conveyed in them would be gradually diffused amongst neighbours with, I am positive, a beneficial result. I always make a point of giving such instructions to those in charge of every case I visit, but it is impossible, for a person of ordinary intelligence even, to remember everything that is told them at such a time, and a mistake, for example, in the strength of a disinfectant solution might be a serious thing.

In connection with this I might also say that parents or guardians or those in charge of the patient do not realise that the system of notification in this district is "dual"—that is, that it imposes the duty *upon them* of reporting any case of infectious disease named in the Act of 1889 to the Medical Officer of Health independently of the medical attendant doing so. I have this year impressed this upon everyone I have visited in this connection, and with beneficial results, as in many slight cases no doctor is called in and the case never reaches our ears. A great deal of obscurity as to the origin of subsequent cases in neighbouring families is thus occasioned, and preventive measures are greatly hampered.

Several cases of the above nature were discovered in Dale Street during the year—some 7 in all—which had never been "notified," but the Brighouse Sanitary Committee was unwilling to institute proceedings because the fact that there was no Isolation Hospital to remove such cases to might have weakened the case.

Such a decision amounts to a confession that notification and isolation should always go hand in hand. Personally I regard notification without isolation as an expensive disappointment: we do get a knowledge of the distribution and origin (in some cases) of disease, an opportunity for remedying sanitary defects, and for giving instructions as to the management of the case so as to prevent the spread of the disease; but there we stop. As a rule I have found my cautions and and advice to work well for three or perhaps four weeks, but after that they are disregarded and the previous good undone.

I have even tried paying second visits to infected houses at the time when I guessed the people would be getting lax in their precautions, but the same plea has always met met me—"How am I to

keep one child upstairs and watch two or three others downstairs at the same time as I am doing my housework?" or "How am I to keep the children from running out and mixing with the others for two or three weeks together?"

I have calculated that had the first case of scarlet fever been removed to Hospital promptly, and all due precautions taken, we might have prevented the occurrence of at least 40 or 45 cases in the same house, to say nothing of the spread to neighbouring houses and streets. This statement partakes more or less of the nature of a prophecy, but it is a very safe one, for the following reasons:—I have taken into account the date of commencement of the disease and notification of the same in each first case, and the same things in relation to each succeeding case. Then, taking as a long incubation period 5 days—the usual incubation period being 3 or 4 days—and supposing that a case commenced on the first day of the month, and was notified to me on the second day, I have allowed five clear days to elapse from the second day, and have noticed whether or not any succeeding case was notified by then—the 8th day of the month. Now, had anyone in the house received infection from the first case on the first or second days, there would have been signs of it by the 8th day at furthest; but I have found that in nearly every instance no second case in the same house has been notified to me for 9 or 10 days or more after the first case, the reason being that the mother has kept her child upstairs to itself for a week or so until the feverish symptoms have gone away, and the others have not had a good chance of taking the infection. Thus in nearly every instance we could have allowed a margin of three or four days for notification and removal of the first case, and even then have saved a large number of succeeding cases.

In 21 houses two children were affected, in 3 houses 3, in 3 houses 4, in 2 houses 5, in another 6, and in yet another 7 inmates were affected consecutively, the illness passing from one to another and remaining in the house for three or four months sometimes.

This is nothing less than deplorable, whatever point of view we look at it from: there are more notifications to be paid for, more disinfectants to supply, and more work to be done by sanitary officials, taking them perhaps away from other more pressing calls for their offices; industry is hampered, education neglected, and school grants diminished; the immigration from rural districts is also discouraged, not only from the prevalence of zymotic disease but also from the prevalence of higher rates which it brings in its train.

Moreover the day may come at any time when an epidemic of some disease may spring up and overrun the township—in fact I always regard each case that is notified to me as the possible starting point of an epidemic, as indeed it might be for anything we know at the time. And an epidemic can grow in three or four days' time to enormous dimensions—a milk-epidemic of Scarlet Fever for example. There is no time then for thinking over the matter, much less for erecting or altering hospitals. There is no better illustration of the old saying "A stitch in time saves nine," for in this case we are dealing with human lives. I sincerely trust that the representatives of your Council on the Hospital Board will support me in this claim for isolation provision.

Measles.—This has caused no deaths during the year, but in the early months was prevalent to some extent along with its companion—*Whooping Cough*—which caused three deaths in children under five years of age (two in Rastrick and one in Brighouse). Towards the end of the year again cases began to appear, but only very few in number.

Diphtheria.—Two deaths have been registered as due to this cause, one in Brighouse and one in Rastrick. The number of cases notified to me was 5, viz.: 3 in Brighouse, 1 in Rastrick, and 1 in Hove Edge. In Rastrick alone in 1892 there were 7 cases and 2 deaths, so that the decrease is very favourable, and more especially so in the face of the gradual increase of Diphtheria in urban districts generally during the last few years. One of the cases was ascribed by me to the fact that the child played about a good deal over a man-hole on the sewer in Elland Road at the top of Brooke Street, where I have often myself noticed offensive smells. Your Sanitary Committee would do well to replace the present cover by an air-tight one owing to its very close proximity to dwelling houses.

Enteric Fever.—There has been but one death due to this cause, that of a person aged 41, in Rastrick, though 12 cases have been notified. In the year 1892 there were 24 cases in Brighouse and Rastrick and 6 deaths: this again shows a favourable decrease. One case was distinctly imported from Wyke, where a woman had been attending a case of the same disease: another in New Street, Brighouse, I referred to the fact that there was a wet and offensive privy-midden built against the kitchen wall, and from this case sprung another in the same house; another in Rastrick Common was associated with an offensive dry-walled drain close to the surface and loosely covered with flags, the children playing about on these flags most of their time, and the effluvium from the drain gaining access to the house through the kitchen windows or the sink-pipe, which ran direct into this "elongated cesspool." In all of the others I discovered minor sanitary defects, some of which, however, were in my estimation scarcely sufficient to account for the disease. In each case a specially marked Fever-pail was sent from the Sanitary depôt, and careful instructions given to the scavengers as to its ultimate disposal.

Erysipelas.—One death only is ascribed to this cause, but 21 cases have occurred in the Borough. In a great many cases I have found that the disease was really more "seasonal" or "constitutional" than caused by insanitary conditions or contagion. In many people the disease recurs every year or every two years, and is of the "facial" variety, and it is in view of such cases as these that many medical men are of opinion that Erysipelas ought not to be retained on the list of notifiable diseases. To all appearance in such cases Erysipelas seems to be idiopathic—a constitutional disease comparable perhaps, with gout; but I scarcely think its removal from the notification list would be beneficial, inasmuch as it is an infectious disease and can cause Erysipelas of the class I mention hereafter, where the conditions are favourable. In other cases where Erysipelas commences in an open wound or at some abrasion of the skin or mucous surfaces, it is probable that some such condition as an insanitary site, bad ventilation or overcrowding, the proximity of foul ashpits, offensive accumulations or drains, or perhaps some case of other infectious disease acts as a strong exciting cause. I made out that 6 of these Erysipelas cases were "seasonal" or "constitutional," the evidence not being strong enough to justify a similar conclusion in any of the others; in 5 out of these 6 cases there was a family history of Erysipelas, showing that the question of heredity has to be considered in the etiology of the disease.

Diarrhœa.—This has been returned as the cause of 15 deaths, of which 11 were in infants (under 1 year of age): the other 4 were in elderly people. The deaths were all confined to the third quarter of the year, and July was the most fatal month. I made this disease the

subject of a Special Report to the Brighouse and Rastrick Local Boards, and handbills were circulated giving advice as to the necessary precautions connected with water supply, foods, drainage, etc. An epidemic of this nature is often followed by typhoid fever, but such was not our experience. As regards the distribution of the disease and its connection with density of population, I can only give you the names of the localities principally affected, with the rough definitions as below :—

	Brighouse.	Rastrick.	HoveEdge.
Above average density	Daisy Croft ; Wm. Henry St ; Firth St., Old Lane ; Dale St.	Red Cross St. ; Gooder Lane.	
Average density.....	Camm St. ; Hardy St. ; Bradford Road.	Bramstone St.	
Below average density	The Rookeries.	Ell'dL'werEdge; Dewsbury Rd.	One.

These are not sufficient data, nor even sufficiently accurate to justify any general conclusion, but should the construction of a *Street-Directory* be possible during the present year, with the deaths from various causes entered up along with the population and general sanitary state, much useful information will be available, and a correct estimate of the health of the different localities in your district gained.

Influenza.—This has again been an unwelcome visitor, but never gained a firm footing. It is returned as the cause of one death only in the whole of the Borough, the secondary cause being bronchitis. In the Spring of the year the type of the disease was fairly severe, and the complications were chiefly gastro-intestinal and marked by high temperatures and somewhat prolonged convalescence.

Scorbutus or Scurvy is returned as the cause of one death, and the disease is by no means unknown in the district. It results, commonly speaking, from the want of fresh vegetables in the diet, and I have occasionally come across cases where, owing to indigestion, persons have omitted this article of food from their dietary, and as a result have fallen in for a worse disease in consequence.

Disinfection.—This has proved a matter of some difficulty in Brighouse, except in cases of Smallpox, where it was most thoroughly carried out by one of the Hospital attendants ; in Rastrick it has been much better done.

When it is left to the householder it generally consists in burning 3 or 4 ounces of flowers of sulphur in an old pan or shovel, or pouring carbolic acid on to hot cinders on a shovel. This of course is intensely absurd—merely creating a bad smell and necessitating the opening of doors and windows for the admission of fresh air, which latter does far more good than the wandering particles of "disinfectant." But now that the Incorporation of Brighouse, Rastrick and Hove Edge is an accomplished fact we have better legal machinery and stronger powers (under the Infectious Diseases Prevention Act) to deal with such cases, and disinfection of a proper kind can now be easily insisted on.

As regards disinfection of bedding, clothing, &c., I see no reason why the disinfecting apparatus now standing idle at the Hospital should not be used. Of course the other districts in the combination would have to be granted a like privilege, and the cost could be appor-

tioned by making a small charge for each article or each disinfection. A similar plan has been in use in Halifax since they acquired a proper apparatus, and even whilst the small-pox epidemic continued, bedding, etc., from other cases of infectious disease were taken to their Hospital and disinfected with perfect impunity.

Respiratory Diseases (excluding Phthisis).—During the year these have been the cause of 85 deaths, of which 35 were in children under 5 years of age. This is at the rate of 3·9 per thousand per annum, or 22·7 per cent. of the total deaths from all causes.

Phthisis has been responsible for 39 deaths, or at the rate of 1·8 per thousand per annum ; this is also at the rate of 10·4 per cent of the total deaths from all causes. Rastrick is responsible for 23 deaths out of the 39, Brighouse for 13, and Hove Edge for 3. In a table in the Appendix I have compared this rate with that of the preceding ten years in Rastrick. I find it to be higher than the decennial average, and higher considerably than the rate of any year of the decade taken. During the last few years it has indeed been making strides in the wrong direction. Phthisis is now generally regarded as a communicable disease, and ere long may be included in the list of notifiable diseases. I doubt the propriety of this in so far as the psychical effect on the invalid himself is concerned, and I also doubt whether the public advantage would be worth the increased expenditure which will be necessary not only for the notification itself but for the additional legislation which will probably be needed before such advantage is gained. I think there are other communicable diseases, such, for example, as the group of venereal diseases, and notably Syphilis, which should be dealt with first ; the experiences of such places as South African States amply proves its urgency.

Heart Diseases.—The various diseases to which this organ is subject have been the cause of 20 deaths—11 in Brighouse and 9 in Rastrick, one of the latter being in a child aged 1 month. The disease shows neither noteworthy abatement nor increase in claiming its victims, as the average deaths from this disease for the preceding five years were 11·0 in Brighouse and 7·6 in Rastrick.

Infant Mortality.—Of the 374 deaths which were registered in the whole of the Borough no fewer than 106 were in children under one year of age. This is at the large rate of 28·3 per cent. of the total deaths, or, putting it in another way, there were 178 deaths of children under one year of age for every 1000 children born. The figures for Brighouse alone are still more appalling, for in that district there were 58 deaths of infants, or at the rate of 29·8 per cent of the total deaths in Brighouse ; this means that for every 1000 children born 202, or more than one-fifth, did not survive the first year of life. I have put in a tabular form the deaths from the various classes of disease, and from this you will see that the chief cause of death has been convulsive diseases : this class of diseases embraces Teething, Convulsions (from whatever cause), Infantile Meningitis, and Hydrocephalus. Wasting diseases include Marasmus, Atrophy, Debility, Want of Breast-milk, and Premature Birth.

TABLE SHEWING THE NUMBER OF DEATHS OF INFANTS UNDER 1 YEAR OF AGE FROM VARIOUS GROUPS OF DISEASES AND THE PROPORTIONS PER 1000 BIRTHS AND PER 1000 DEATHS FROM ALL CAUSES UNDER 1 YEAR OF AGE.

Class of Disease.	Total Deaths.	Deaths per 1000 Births.	Deaths per 1000 of Total Deaths under 1 Year.
BOROUGH.			
Wasting Diseases	23	38·7	217
Convulsive Diseases ...	38	63·9	358
All other Diseases	45	75·7	424
BRIGHOUSE.			
Wasting Diseases	9	31·4	155
Convulsive Diseases ...	21	73·4	362
All other Diseases	28	97·9	482
RASTRICK.			
Wasting Diseases	10	36·2	250
Convulsive Diseases ...	13	47·1	325
All other Diseases	17	61·5	425

As Brighouse presents the most prominent advance on previous years I have, for purposes of comparison, examined into the infantile deaths in that district for the last five years, and append a Table in which I show the rates for each year from 1888 to 1892 inclusive, the average for these years and the rates for 1893.

TABLE SHEWING INFANT MORTALITY IN BRIGHOUSE FROM 1888 TO 1892, AND ALSO IN 1893.

Year.	Total Births.	Total Deaths at all Ages.	Infantile Deaths.	Deaths per 1000 Births.	Deaths per cent. of Total Deaths at all Ages.
1888	301	139	29	96	20·8
1889	279	155	41	146	26·4
1890	275	201	41	149	20·3
1891	321	199	52	162	26·1
1892	282	199	47	166	23·6
Average for above Five Years.	292	178	42	144	23·4
1893	286	194	58	202	29·8

Thus we see on comparison with the records of the last five years that Brighouse stands out prominently with a high infant mortality—higher than the average of the preceding five years, and higher than any other single record during that time. On careful analysis of the causes of death during that period, and comparison with the record of 1893, we find that the factor in the causation of death which has most increased is convulsive diseases. This, I think, will be readily seen by a study of the Table below, in which I have classified the deaths of infants under various headings.

TABLE SHEWING INFANT DEATHS CLASSIFIED ACCORDING TO VARIOUS CAUSES FOR THE FIVE YEARS 1888 TO 1892, AND ALSO IN 1893.

Year.	Total Deaths under 1 Year.	Wasting Diseases.	Convulsive Diseases.	Chest Diseases.	All other Causes.
1888	29	10	6	5	8
1889	41	10	15	8	8
1890	41	19	7	7	8
1891	52	14	15	15	8
1892	47	14	11	13	9
Average for Five Years.	42	13	10	9	8
1893	58	9	21	10	18

We find then from this Table that the number of deaths from convulsive diseases in infants in 1893 is double the average of the preceding five years. Needless to remark, this is eminently unsatisfactory. Let us then consider the ultimate cause and the remedy. The chief influences affecting infant mortality are the following :—

1. Inherited diseases or tendencies to disease.
2. Premature birth.
3. Occupation of mothers during pregnancy or shortly after childbirth.
4. Illegitimacy of Birth.
5. Accidental or homicidal violence.
6. Epidemics of autumnal diarrhœa, measles or whooping cough.
7. Density of population on any given area.
8. Improper management and feeding resulting from parental inexperience and neglect.
9. Child insurance.

The first cause may be eliminated altogether. As regards the second—premature birth—it has been the cause of 8 of the 58 infant deaths in Brighouse. Convulsions pure and simple have caused 17 out of the 21 deaths from convulsive diseases, and in the majority of these 17 cases, as well as the other 4, the convulsions have been preceded by alimentary disturbances due to improper management and feeding. A sketch of an everyday case will illustrate my meaning better than any dogmatic remarks. A mother is unable from various causes to suckle her child : she turns to the next best thing obtainable—cow's milk—and being advised by her medical attendant, who visits for 10 or 14 days as a rule after the birth of the child, succeeds very well perhaps for a time. Soon she is left to her own devices ; the thorough cleansing of the bottle becomes irksome, and very little traces of soured or decomposed milk are left in nooks and corners : this is enough to infect the whole of the milk next put into the bottle, and some amount of fermentative change is caused. Ignorant of any change in the milk the mother goes on feeding the child with it : it causes discomfort in the child, succeeded by vomiting, diarrhœa, or other digestive disturbance. If this goes on for long, inanition, weakness, and liability to the bad effects of insanitary conditions or infectious disease results, and the child succumbs. Again, malnutrition, diarrhœa, or debility are often succeeded by convulsions ; the parents fail to notice the premonitory signs, such as the momentary squinting of the eyes, the twitching of the mouth, the rigid fixing of the head and neck, the firm clenching of the little fists or the doubling in of the toes, the stiffening of the arms or legs, the widely dilated pupils, or the livid blue lips. In a few

minutes the child is "in a fit," and the parents helpless for the want of the simplest item of knowledge imaginable. Their duty is to undress the infant rapidly and plunge it bodily into a mustard bath, and then send for the nearest medical man. Should the fit be of short duration, and the child not be any the worse for it, the parents in assigning a cause for it almost invariably ascribe it to teething, when teething may be going on quite normally, and the only cause be a dirty bottle or some improper food—for it is a very common custom to feed infants as early as possible on "a bit of anything that is going." I have known of beef, pastry, potatoes, beer and stout, and various other poisons being given to infants on the same principle of bravado, as I have heard mothers boasting of their children, ill with Scarlet Fever, being outside playing whilst the rash was still on them!

To continue: as the parents have happily solved the cause of the fit, their next procedure is to invest in some "teething powders" or "soothing syrup," many of which contain opium in some form; or to take some mixture or medicine from a so-called "medical chemist" or "prescribing chemist," altogether unsuited to the case: the child is dosed with this and perhaps poisoned, or else, when no alleviation of the symptoms can be procured, a medical man is called in (often at the extremity of the case): he sees the child in a convulsive fit, and certifies the cause of death to be "convulsions" or "debility—convulsions" or "dentition—convulsions." But I maintain "convulsions" is not a disease any more than vomiting is a disease; it is but the symptom or objective sign of some disease. It ought never to be admitted as a primary cause or as a single cause of death: if admitted at all, it ought to be restricted in its use to a mere secondary cause.

Further, if a medical man be only called in in time to see a child die of convulsions he ought, in my opinion, to refuse to certify as to the cause of death: let an inquest be held in every case and the true cause found.

Another thing which might tend to lessen infant mortality would be for the Local Authority to supply the Registrars with a number of forms containing printed directions in simple language as to the management and feeding of infants: one of these could be given to each person registering a birth.

Yet another thing I would like to see in Britain—the prohibition of the sale of "patent" medicines except on the prescription of a medical man. I am convinced this would greatly lessen the evil of infant and child mortality—to say nothing of the mortality at all ages.

The total number of deaths from Premature Birth in Brighouse has been 8, in Rastrick 6, and in Hove Edge 2, making a total of 16 for the Borough. There has been a great deal of discussion lately on the question of employment of married women in factories and workshops. The Factory and Worshop Act of 1891 (s. 17) says:—

> "An occupier of a factory or workshop shall not knowingly allow "a woman to be employed therein within *four weeks after* she "has given birth to a child."

This is a very short period indeed, and in fact takes more thought for the mother than the child, if, indeed, it was ever intended to provide for the child. One thing which cannot be remedied by anything but the conscientiousness of parents is to take account of the fact that an arduous occupation is often the cause of premature birth: did married women take this into consideration and act on it by discontinuing the hardest work for a short time (say 2 months at least) before the anticipated birth of the child, many deaths from premature birth might be prevented. But there are many things for them to consider—for ex-

ample, loss of present wages, prospective loss of situation, etc., and on the whole they simply go on as long as they can, and risk any probable accident. I should like to see the short time of four weeks, mentioned in the above Act, extended to 6 months at least—preferably to 12 months: of course, this means total devotion to home-life.

As regards the influence of the density of population I can state nothing with accuracy, but the following classification will perhaps convey some notion of the state of affairs. In localities in Brighouse which are above the average density there have been 25 out of 58 deaths of infants; in localities of average density—and it must be borne in mind that the term average density applies to Brighouse, a very dense place itself—there have been 20 deaths out of 58; and in places below average density the infant deaths have numbered 13. In a very large majority of the cases the buildings are blocks of back-to-back houses.

SANITATION.

During the year 1893 I have made altogether some 508 inspections of premises, general or special, these being distributed as follows:—Brighouse 280, Rastrick 218, Hove Edge 10. Amongst other places the following have been specially looked after:—

Canal Boats	15 inspections.
Bakehouses (retail)	18 ,,
Lodging Houses	18 ,,
Slaughter Houses	9 ,,
Factories and Workshops. ...	5 ,,
Cowsheds	21 ,,
Milkshops	26 ,,
Sanitary Depôt, Brighouse ...	6 ,,

Drainage.—There are a great many cases calling for special comment in this connection. During the year the Local Board of Brighouse has been very active, and a large number of sewers have been put into a better state, the old dry walled ones being replaced by sanitary pipes of proper diameter, and ventilation being specially attended to. In the Report of your Sanitary Inspector, Mr Emerson Brooke, you will find special mention made of the particular cases.

Rastrick also has been keeping well to the fore, and a large amount of drainage has been completed, though much has had to take simple makeshift remedies pending the conclusion of the Sewerage Scheme. I have commented on a few special cases in a subsequent paragraph.

There is a great objection amongst property owners in your district to the trapping and disconnection of house drains. No amount of persuasion will show them that an S-trap is necessary to prevent the foul gases given off from the interior of a sink-pipe which is coated with grease, soapy matter and other kinds of filth from rising into the house, aided by the draught caused by the fire or the wind. They are necessary in every case, and more especially so when there is a long length of sink-pipe with very little fall. In most houses there is a cupboard above the sink-stone in which some articles of food are kept, or at any rate the plates, cups, etc., from which the family eat, and it cannot be healthy for persons to eat of or from such things when they have been exposed for three or four hours or more to a direct current of drain-gas. There is also the fact that the woman of the house whilst washing, etc., stands over the sink for a long time together inhaling drain-gas. And when we come to look outside we find in a large majority of cases that if there is a gulley-trap it is often improperly fixed so that the sink waste delivers into the ground round about it, or that the trap is covered up with bricks or stones, the state of which shews that

it is never cleaned out or cared for at all. The favourite trap for house-drains seems to be the old-fashioned and inefficient siphon-trap with the central ventilating shaft: the sewage eddies round this central vertical shaft, and foul floating matter coats its interior, and is very difficult to flush away; the inlet and outlet of the trap being generally on the same level there is no chance of the trap being properly flushed out, and solid filth settles in the trap, eventually choking it. Besides all this, the so-called ventilating shaft really only ventilates the small amount of sewage in the trap, and if the trap, as a trap, be efficient, there is no through ventilation of the house drain.

Your Authority should consider the question of keeping a supply of the proper Buchan traps at your Sanitary Depôt, and property owners would then have no excuse for not putting in the proper kind. Besides this I am of opinion that, as Sanitary Inspectors are the persons who are called in to examine drains when they are out of order, and put them to rights or suggest remedies, they should have some kind of authority in the case of new buildings, to superintend the laying of the drains and their connection with the sewers. When the same person is Surveyor and Sanitary Inspeetor this of course is accomplished, but when the offices are separate I am of opinion that the Sanitary Inspector should have that portion of the work relegated to him.

Drainage of Slade Lane, Rastrick.—On the 15th of April I visited the house of Mr Helm, Slade Lane, where there was a case of scarlet fever, arising from infection at school or whilst the child was at play. Scarlet fever is not an illness which comes from defective drainage, but the fact of defective drainage existing on the premises would lessen the chance of recovery and probably intensify the throat symptoms. In my routine enquiries I discovered that there was a cesspool in the front garden—a few feet from the room window. I inspected the cellars but could discover no evidence of bad drainage—nothing in fact further than a slight dampness of the walls and the peculiar musty smell common to all cellars. The people of the house complained of the proximity of the cesspool, and I naturally enough said that it was not a good thing from a sanitary point of view. The matter was reported to the Sanitary Committee of the Rastrick Local Board, and a deputation appointed to inspect the whole of the Slade Lane houses. I attended with this deputation on April 24th, and afterwards discussed the matter with them. Nothing of any import was decided at that time. Again on May 8th the matter was brought up, and again nothing decisive was resolved on. I then communicated with Dr. Whitelegge, and on July 21st he visited the place with the Chairman of the Sanitary Committee and myself. He entirely agreed with what I had previously enunciated—viz., that the householder in question, Mr Helm, had no further ground of complaint than the other householders, and that, as every sanitarian would admit, the sooner the cesspools were done away with the better. The matter again came up at the next meeting of the Sanitary Committee, and it was decided to adopt the advice of Dr. Whitelegge and communicate with Mr Fowler to see whether he could drain that portion of the district at an early period: if not, then it would be for the Sanitary Committee to consider the cost and expediency of laying a pipe sewer to take all the houses in question and connecting this sewer with the one in New Road, at present taking surface water—"a barbarous idea" as Dr. Whitelegge himself confessed whilst mentioning it. It would then be the duty of the Sanitary Authority to call on the owners of the property to connect their house drains with this sewer, since their houses are

by their own confession "ineffectually drained." The cesspools would then need thoroughly cleansing and filling up.

For the last few months matters have been in such a state of chaos, owing to the Incorporation of the Borough, that I have heard nothing at all about any further steps in any direction.

Drainage at Woodhouse.—On February 23rd I visited the house of a Mr. Pamment, Little Woodhouse, where there was a case of scarlet fever, and I inspected his house and three others. They were in a bad state as regards drainage, none of the sink-pipes being trapped but running direct into a dry-walled drain which conducted the sewage into a field. I again viewed the premises after a preliminary notice had been served on the agent for the property; nothing was done until a legal notice was served on March 29th, after which these four houses were properly drained, and the drain, or rather sewer, conducted down the field to take in four other houses of the same owner.

On August 15th the Sanitary Inspector sent a preliminary notice to Mr G. H. Crowther requesting him to drain two houses occupied by Messrs John Jowett and Gough into the sewer of the Local Authority which is mentioned above as receiving the sewage of eight other houses at Woodhouse, this sewer being within 100 feet of the site of Mr. Crowther's houses. Mr. Crowther replied that he wished the Local Authority to do it as a private improvement. Since then this matter has also stood in the background owing to the Incorporation of the Borough.

Sewage Disposal.—The members of the Brighouse and Rastrick Local Boards forming the Special Sanitary Committee have been very fully occupied during the year in the consideration of this vexed question of Sewage Disposal. During the year Mr. Fowler, M.I.C.E., of Manchester, who was appointed Engineer, has made a survey of the whole Borough with a view to arranging for the sewerage of the Borough of Brighouse and other contiguous districts — Clifton, Hartshead, etc.

Your Committee has also been in negociation with Sir George Armytage for the purchase of the necessary land at Cooper Bridge for outfall works, etc., and these negociations are fast approaching settlement. Visits of inspection have been paid to various Sewage Works at Leeds, Salford, Hebden Bridge, Rochdale, etc., with a view to determining the most efficient process available, and it is to be sincerely hoped that the Scheme will be entered upon very shortly.

In this connection I should like to draw your attention to the present state of the River Calder at Brighouse, as shewn by the weekly analyses by Dr. Whitelegge of water taken from it. The figures show the mean values of seven weekly analyses of samples taken from October 17th to November 28th, 1893, during the time of the coal strike, when some local industries were quiet.

	Parts per million.
Hardness (Clark's degrees)	5·0
Chlorine	18·7
Alkalinity (in terms of Carbonate of Soda) ...	30·7
Solid Matter—Total	210
,, ,, loss on ignition	83
Ammonia—Free	0·948
,, Albuminoid	0·637

Canal Boats.—During the year these have been inspected regularly by the Sanitary Inspector, accompanied in many instances by me, and with the exception of slight unwillingness on the part of some masters to produce their registration papers, no contravention of the Acts has been found. The importance of this branch of Sanitary work is very great, as we have in England and Wales about 7000 families living in canal boats ; were they not regularly inspected and controlled by good legislation the spread of disease would be greatly increased, and the state of the inhabitants would be similar to what it was in our prisons in the time of "goal-fever," "prison-week," etc.

But we require a stronger hand to deal with the migratory population of caravans and all vagrants, for these have been a means of spreading disease throughout the whole country during the year. Of course both caravans and canal boats are houses within the meaning of the Sanitary Laws, but then they are movable houses and often difficult to catch.

Sale of Food and Drugs Acts.—During the year there have been 25 samples submitted under these Acts, all of these being taken in Brighouse.

There were 25 samples of milk taken on the 21st and 24th of April, and these were submitted to Mr. Allan, of Sheffield, for analysis. They were taken from vendors coming in from Rastrick, Clifton, Southowram, Hipperholme, Lightcliffe, etc. The results of the analysis are given in a classified form below :—

(*a*)	Genuine samples of superior quality... ...	3
(*b*)	Genuine samples	6
(*c*)	Samples of fair or moderately good quality	6
(*d*)	Samples of inferior quality	6
(*e*)	Samples of suspiciously poor quality, but not suficiently bad to justify positive condemnation as adulterated	4
		25

This is a branch of the Sanitary Department which needs extension. Milk is undoubtedly an important article to deal with and watch, but there are others such as bread, flour, butter, coffee, cocoa, &c., which are equally staple articles of diet, and which are equally, if not more, liable to adulteration. So far, in your district, they have been allowed to go scot-free, but I hope soon to see this remedied.

Another branch of Sanitary work which has been neglected is **Smoke Inspection**, which ought to be taken in hand without delay. Such things as polluted rivers appeal to one's senses of sight and smell when a vitiated atmosphere escapes notice ; just in the same way as some people will object strongly even to drinking out of the same glass as another person, but will sit for hours together breathing the air expired from his lungs.

Dairies, Cowsheds & Milkshops.—These have received special attention during the year, and several cases of overcrowding have been dealt with. Though the minimum cubic space per head of cattle prescribed by the Regulations is 800 cubic feet we have in many cases allowed 600 to pass where there have been in addition good facilities for ventilation without causing draughts, and especially where there has been good head-space or a fodder-passage.

There are a great many places of the nature of milkshops or dairies to look after, but I think in both Brighouse and Rastrick a good account can be rendered of these.

Factories & Workshops.—This branch of work is a very large one, and for efficient management would almost require a special inspector. We have been practically only feeling our way this year, but have been successful in remedying a goodly number of bad conditions. Any special mention would undoubtedly be invidious, but I must say that the occupiers of those workshops or workplaces which we have inspected have always been most anxious to carry out any suggestions we have offered, to make the work-life of their employés more healthy and better in every respect, though in some cases it has entailed a heavy outlay on their part.

Meteorology.—I had originally intended to append a short Meteorological Summary for the year, but on consultation with Mr. Gledhill, of the Bermerside Observatory, Halifax, have decided that the information derived from observations taken at such a distance and on such a different site would be valueless. I would therefore strongly recommend your Council to obtain a set of standard Meteorological instruments and have them placed on some suitable site within the Borough boundaries ; observations could then be taken with regularity, and would prove of undoubted value. The instruments could be purchased, tested and fitted up at a cost not exceeding £25, and as they form such an important adjunct to a Health Department, being closely associated with the prevalence of certain diseases and the spread of epidemics, as well as supplying useful data for Water Supply and Sewage questions, I have not the slightest hesitation in saying that your Council as well as the public generally would be amply repaid for the small outlay and trouble necessary to obtain them.

(A) TABLE OF DEATHS during the Year 1893, in the Urban Sanitary District of the

BOROUGH OF BRIGHOUSE,

Classified according to Diseases, Ages, and Localities.

Names of Localities adopted for the purpose of these Statistics; public institutions being shown as separate localities. *(Columns for Population and Births are in Table B.)* (a)	Mortality from all causes, at subjoined Ages.								Mortality from subjoined causes, distinguishing Deaths of Children under 5 Years of Age																				
									1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
													Fevers.																
	At all ages. (b)	Und'r 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25 (f)	25 and under 65. (g)	65 and upwards (h)	(i)	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhœa and Dysentery.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia and Pleurisy.	Heart Disease.	Injuries.	All Other Diseases.	Total.
BRIGHOUSE - -	194	58	29	14	5	50	38	Under 5	.....	11	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	7	.....	.....	1	20	.....	1	45	87
								5 upwds	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	12	24	11	1	49	107
EASTRICK - - -	159	40	19	6	10	59	25	Under 5	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	4	.....	.....	1	13	1	.....	35	59
								5 upwds	.....	1	1	.....	.....	1	.....	.....	2	.....	1	.....	.....	1	1	.....	22	24	8	.....	38	100
HOVE EDGE - -	21	8	5	—	2	5	1	Under 5	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	10	13
								5 upwds	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	3	2	.....	.....	1	8
Total for Borough	374	106	53	20	17	114	64	Under 5	.....	15	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	11	.....	.....	2	35	1	1	90	159
								5 upwds	.....	9	1	.....	.....	1	1	.....	2	.....	1	.....	.....	4	1	.....	37	50	19	1	88	215

The subjoined numbers have also to be taken into account in judging of the above records of mortality.

Deaths occurring outside the district among persons belonging thereto.	2					2		Under 5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
								5 upwds	2																					2
Deaths occurring within the district among persons not belonging thereto.								Under 5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
								5 upwds																						

Area in Acres, 2,224
Population (1891), 20,666 } of Borough of Brighouse.

(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS,

coming to the knowledge of the Medical Officer of Health, during the year 1893, in the Urban Sanitary District of the

BOROUGH OF BRIGHOUSE,

Classified according to Diseases, Ages and Localities.

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	Population at all Ages.		Registered Births.	Aged under 5 or over 5.	New Cases of Sickness in each Locality coming to the knowledge of the Medical Officer of Health.													Number of such Cases Removed from their Homes in the several Localities for Treatment in Isolation Hospital.												
					1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13
									Fevers.													Fevers.								
	Census 1891.	Estimated to middle of 1893.			Smallpox	Scarlatina	Diphtheria	Membranous Croup	Typhus	Enteric or Typhoid	Continued	Relapsing	Puerperal	Cholera	Erysipelas			Smallpox	Scarlatina	Diphtheria	Membranous Croup	Typhus	Enteric or Typhoid	Continued	Relapsing	Puerperal	Cholera	Erysipelas		
(a)	(b)	(c)	(d)	(e)																									
BRIGHOUSE	10,276	10,610	286	Under 5	4	55	1											4											
				5 upwds	16	98	2			4					9			16											
RASTRICK	9,279	9,583	276	Under 5		31				3					1														
				5 upwds	3	52	1			5			2		12			3											
HOVE EDGE	1,111	1,437	32	Under 5		1																							
				5 upwds		2					1																		
TOTAL FOR BOROUGH	20,666	21,630	594	Under 5	4	87	1			3					1			4											
				5 upwds	19	152	3			9	1		2		21			19											

Notification of Infectious Disease, compulsory since 1890 in Brighouse, 1891 in Rastrick, and 1889 in Hove Edge.

Isolation Hospital: Brighouse and District Joint Hospital (for smallpox cases only); situated in Clifton.

TABLE SHEWING THE DEATHS FROM PHTHISIS OR PULMONARY CONSUMPTION IN RASTRICK FOR THE TEN YEARS 1883 TO 1892 INCLUSIVE, AND ALSO FOR 1893, WITH THE RATES PER THOUSAND PER ANNUM AND THE PERCENTAGE OF TOTAL DEATHS.

Year.	Population	Total Deaths.	Deaths from Phthisis.	Rate per 1000 per Annum.	Percentage of Total Deaths.
1883	8645	167	21	2·4	12·5
1884	8680	222	17	1·9	7·6
1885	8825	159	13	1·4	8·1
1886	8950	178	15	1·6	8·4
1887	9075	179	16	1·7	8·9
1888	9592	159	19	1·9	11·9
1889	9865	180	16	1·6	8·8
1890	9981	164	21	2·1	12·8
1891	9311	212	28	3·0	13·2
1892	9448	172	16	1·6	9·3
Annual Average.		179	18	1·9	10·6
1893	9583	159	23	2·4	14·4

TABLE SHEWING THE NUMBER OF BIRTHS AND DEATHS IN RASTRICK IN THE TEN YEARS 1883 TO 1892, INCLUSIVE, AND IN THE YEAR 1893; ALSO THE DEATHS FROM ZYMOTIC DISEASES, RESPIRATORY DISEASES, AND PHTHISIS.

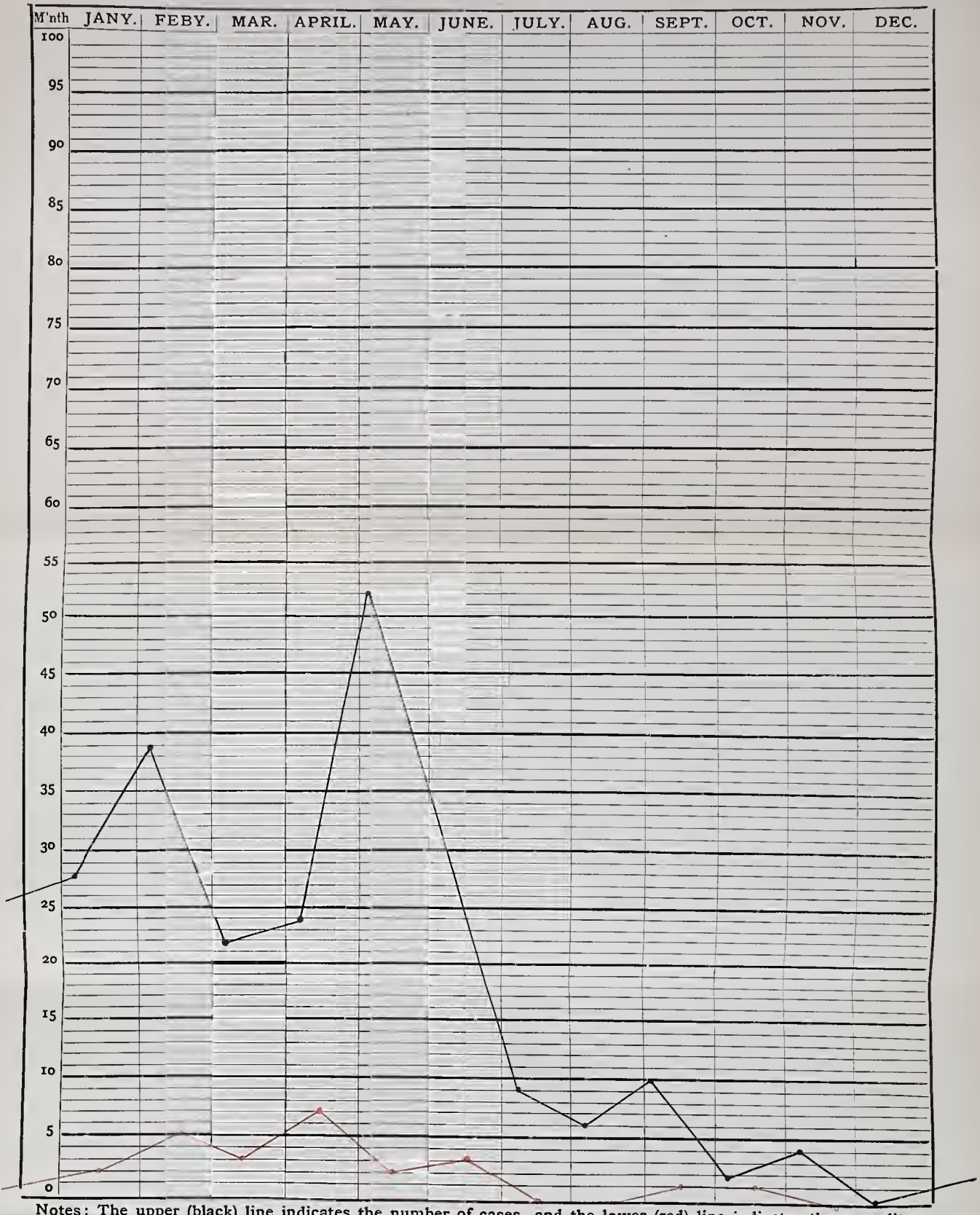
Year.	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	Annual Average of 10 Y'rs	1893
Births.	280	290	306	268	293	285	276	280	311	270	286	276
Total Deaths.	167	222	159	178	179	159	180	164	212	172	179	159
Deaths fron Zymotic Diseases.	19	49	19	22	25	12	43	21	28	49	28·7	14
Deaths from Respiratory Diseases.	37	39	29	48	36	37	31	41	50	39	38·7	37
Deaths from Phthisis.	21	17	13	15	16	19	16	21	28	16	18·2	23

TABLE SHEWING THE NUMBER OF DEATHS IN 1893 AT ALL AGES, FROM CERTAIN GROUPS OF DISEASES AND PROPORTIONS TO 1000 OF THE POPULATION AND TO 1000 DEATHS FROM ALL CAUSES; ALSO THE NUMBER OF DEATHS OF INFANTS UNDER ONE YEAR OF AGE FROM OTHER GROUPS OF DISEASES AND PROPORTIONS TO 1000 BIRTHS AND TO 1000 DEATHS FROM ALL CAUSES UNDER ONE YEAR.

DIVISION 1. All Ages.	Total Deaths.				Deaths per thousand of Population at all Ages.				Deaths per thousand of Total Deaths at all ages.			
	B'rough	Brigh'se	Rastrick	Hove Edge.	B'rough	Brigh'se	Rastrick	Hove Edge.	B'rough	Brigh'se	Rastrick	Hove Edge.
Principal Zymotic Diseases.	48	31	14	3	2·2	2·9	1·4	2·0	125	159	88	142
Pulmonary Diseases.	85	44	37	4	3·9	4·1	3·8	2·7	227	226	232	190
Tubercular Diseases.	53	18	32	3	2·4	1·6	3·3	2·0	141	93	201	142
DIVISION 2. Infants under One Year.	Total Deaths.				Deaths per thousand Births.				Deaths per thousand of Total Deaths under one Year.			
Wasting Diseases.	23	9	10	4	38·7	31·4	36·2		217	155	250	190
Convulsive Diseases.	38	21	13	4	63·9	73·4	47·1		358	362	325	190

BOROUGH OF BRIGHOUSE.

Chart shewing the Monthly Cases and Deaths from Scarlet Fever, 1893.



Notes: The upper (black) line indicates the number of cases, and the lower (red) line indicates the mortality.

Brighouse Urban Sanitary Authority.

REPORT OF SANITARY INSPECTOR.

To the Chairman and Members of the Sanitary Committee.

Gentlemen,

I beg to present you with my Report on the Sanitary Work done during the year 1893 in the District of the Brighouse Urban Sanitary Authority.

In Table C, at the end of this Report, you will find the total work done classified under the various headings, and in this Report I wish simply to draw your attention to several special cases.

Nuisances.—There were 40 Nuisances of various natures reported during the year, and these were carefully attended to, with the result that 39 have been abated, and the remaining one is being attended to. These have been done without recourse to any legal proceedings further than the service of notices.

Drainage.—During the year 42 sink-pipes have been disconnected and trapped, 21 drains or sewers have been repaired or cleansed, and 9 new drains trapped and properly ventilated.

A special mention of a few instances will convey a better idea of the work done.

1. Manley Street.—Here 14 houses owned by Mrs. Crossley were re-drained and the sink-pipes properly trapped with S traps and disconnected over trapped gullies in the yards.

2. Thornhill Briggs.—Four houses, owned by Miss Blackburn, draining into an old dry-walled drain : this was taken up entirely and a new drain constructed of sanitary pipes.

3. Elland Road.—Here again an old rubble drain receiving the sewage of four houses was taken up and relaid with sanitary pipes, the houses being properly disconnected, &c.

4. Royal Oak Inn.—On a complaint of water getting into the cellar this place was inspected, and the only subsoil drain to be found was a dry-walled one which allowed considerable leakage : this was taken up, relaid with pot pipes, ventilated, &c.

5. Bank Street.—Here a dry-walled drain receiving the sewage of eight houses was taken up and relaid with pot pipes.

6. Church Street.—Complaint of sewer gas getting into seven houses owned by Mr Barber : this was found to be due to the fact that the drains were not ventilated, and accordingly a Buchan trap, which acts as trap and inlet for ventilation also, was inserted on the sewer and was found to remedy the nuisance.

7. **Oddfellows' Hall.**—Here, owing to a nuisance existing in five houses, the sewer was trapped and ventilated on the house side of its junction with the main sewer.

8. **Commercial Street.**—Here, on the premises occupied by Mr. Cocksedge, fifteen yards of 6-inch pot pipe drain were laid to effectually drain the yard and cellar.

9. **Simpson's Yard, Mill Lane.**—In this place eight houses and some stabling were practically re-drained, the whole of the houses being disconnected and some new pipes laid.

In addition to all these the various sewers were regularly flushed and cleaned out, those in Bradford Road and Back New Street receiving special attention. The latter was entirely made up.

Excrement Disposal, &c.—In connection with this I may state that the present arrangement of having the privy middens, etc., cleansed by the Sanitary staff has worked well and given satisfaction during the whole of the year.

A very large amount of work has been done in connection with the construction of new privy middens or alteration of old ones during the year. I have made a large number of inspections in company with your Medical Officer of Health, with the result that during the year no fewer than 55 new closets have been constructed on the tub system, and 89 old ones which were for the most part in a very foul and offensive state have been altered to the tub system. 24 new dry ashpits have been also constructed, and 32 wet ashpits altered to the dry system: 4 wet ashpits have had dry ash tubs substituted.

There are now about 1400 pail closets in the Brighouse district, as compared with 1,240 in 1892, whilst there are left 13 uncovered privy middens.

Canal Boats.—These have been the subject of special attention, 27 in all having been thoroughly inspected, and no infraction of the provisions of the Canal Boats Acts discovered.

Amongst other things which have been regularly inspected are the 2 Lodging Houses, 2 Slaughter Houses, 6 Bakehouses, 14 Milkshops and 1 Offensive Trade, with 5 Workshops.

In April, I took 25 samples of milk under the Sale of Food and Drugs Acts and submitted them personally to the Analyst: the results of the analysis are given in the Report of the Medical Officer of Health.

In conclusion, I have to thank your Sanitary Committee and Clerk for the hearty support they have given me during the year.

I remain, Gentlemen,

Yours Obedient Servant,

EMERSON BROOKE.

TABLE C. 1893.

BRIGHOUSE URBAN SANITARY DISTRICT.

MEDICAL OFFICER OF HEALTH, MEREDITH YOUNG, M.B. C.M. (Edin.)

Date of First Appointment, Jan. 23rd, 1893.

,, Last Re-appointment———— Present Salary————

Term of Appointment, to Dec. 25th, 1893.

Rateable value of District for General District Rate, £32,450.

Special reports presented during 1893 ... ...) Report on Scarlatina Epidemic, May, 1893. ,, Prevalence of Diarrhœa, Aug., 1893.

SANITARY INSPECTOR, EMERSON BROOKE.

Salary, £104.

WATER SUPPLY—

Any extension or change during 1893 ? No.

Portions of districts inadequately supplied ? None.

Cases of lead poisoning in 1893 ? None.

SEWERAGE AND SEWAGE DISPOSAL—

Extensions or improvements during 1893 ? None.

EXCREMENT DISPOSAL—

Are the privy middens, &c., cleansed by sanitary staff, by contractors, or by tenants ? — By Sanitary Staff.

Is the present arrangement satisfactory ? Yes.

BYE-LAWS, REGULATIONS, AND ADOPTIVE ACTS—

Any new Bye-laws, or Regulations for Dairies, Cowsheds, &c. ? [If so, please send Copy.] — No.

What portions (if any) have been adopted of the Infectious Diseases (Prevention) Act ? ... ... — The whole came into force Nov. 9th, 1893.

REGULATED BUILDINGS, TRADES, &c.

	Number ?	General Condition ?	Legal Proceedings (if any) ?
Common Lodging Houses	2	Satisfactory.	None.
Canal Boats	27	,,	,,
Slaughter Houses	2	,,	,,
Bakehouses	6	,,	,,
Dairies			
Cowsheds			
Milkshops	14	,,	,,
Offensive Trades ... ... (Please Specify Nature)	1 Soap Works.	,,	,,

METEOROLOGICAL OBSERVATIONS (if any) taken in or near the District. None.

BIRTHS—Please state (*a*) Number of each sex, Male 145, Female 141.
(*b*) No. Illegitimate, Not distinguished by Registrar.

DEATHS—Please state (*a*) Number of each sex, Male 101, Female 93.
(*b*) No. Uncertified, 13.

DEATH RETURNS—What correction (if any) is made for non-residents dying within the District ? — None has been necessary.

Are any Returns obtained of deaths of residents occurring in public institutions, (Workhouses, Hospitals, &c.) outside the District. — Yes, in Smallpox Hospital, Clifton.

HOSPITAL FOR INFECTIOUS DISEASES—
No. of Beds, 48. Charges to Patients, *Nil.*

Construction (Brick, Stone, Wood, Iron, Altered House or Cottage, &c., &c. — Corrugated Iron and Wood, Outbuildings Brick.

What Diseases are admitted ? Smallpox only.

DISINFECTION. Apparatus (Steam ? Hot-air ?) Steam.
Work done in 1893 ? Disinfection of Bedding, Clothing, &c., of Smallpox Cases.

Amount paid as compensation for articles destroyed, *Nil.*

SANITARY WORK—

Total No. of Nuisances remaining over from 1892, *Nil.*

Reported during 1893, 40.
Abated during 1893, 39.
Unabated at the end of 1893, 1.

Total No. of Summonses or other legal proceedings, *Nil.*

House Drainage—
No. of Sinks disconnected and trapped during 1893, 42 ; 21 Drains have been repaired and cleansed ; 9 new Drains trapped and ventilated.

CLOSETS. Approximate No. of each kind in District—W.C. 150. Trough-C. — Slop-C. (Waste-water, C.) — Pail, 1400. Covered Privy-Middens, — Uncovered Privy-Middens, 13.

No. of each of the above kinds constructed during 1893—
55 new Tub Closets constructed, also 8 W.C.s and 24 new Dry Ashpits. 89 old Privy Middens altered to Tub System and 32 Wet Ashpits altered to Dry.

DESTRUCTOR.—None.

What action has been taken in regard to the following matters ?—

Closure of Houses unfit for habitation, *nil.*

Overcrowding. One case reported : no necessity for action.

Seizure of Unsound Food. 2 Carcases. Prosecutions, *nil.*

Samples taken under the Sale of Food and Drugs Acts, 25. Prosecutions, *nil.*

River Pollution, *nil.*

Smoke Abatement, *nil.*

Rastrick Urban Sanitary Authority.

Report of the Inspector of Nuisances for the Year ending December 30th, 1893.

To the Chairman and Members of the Sanitary Committee.

Gentlemen,

I beg to present you my Seventh Annual Report on the operations of the Sanitary Department for the year ending December 30th, 1893.

Summary of Work done.

Total number of Visits	918
Total number of Cases reported	153
Rooms disinfected after Infectious Diseases ...	39
Cases Removed to Hospital	3
Notices Served	38
Letters respecting Nuisances	93

Nature of Nuisances.

House Drains defective	42
Houses without Drains	2
House, Drains under	1
,, ,, choked	1
Houses overcrowded	2
,, water percolations into	2
,, without Water	2
,, dirty	3
Shops dirty	1
Cellars, stagnant water in	7
,, sewage water in	2
Cellar Drains choked	1
Yard Drains choked	3
Sink-pipes broken	2
,, direct to Drain	43
,, requiring disconnecting	21
Offensive accumulations	4
,, Piggeries	4
,, W. C.'s	4
,, Swill-tubs	2
,, Privies	12
Cesspools overflowing	2
Insufficient Privy accommodation	9
	172

In addition to the above, the following cases have come under my notice :—

May 12th, complaint of offensive smell in Foundry Street, arising from the Brighouse Sanitary Depot, on receipt of which I visited the place with Mr. Brooke, who gave instructions that every means possible must be used in future to prevent it. Nothing has been said or heard since.

On May 12th I had occasion to complain of solid matter being allowed to escape into the River from the Calder Dyeworks, which proved to be through the negligence of some of the workmen, and was abated at once.

May 27th, The dirty condition of the outhouses at one of the Church Schools, which was very soon attended to with satisfactory results.

June 7th, Fish washings thrown into the road. There has been no recurrence.

Aug. 25th, Plums and other bad fruit destroyed.

Aug. 31st, Seizure of unsound Fish, which was seen by one of Her Majesty's Justices of the Peace and an order obtained for its destruction. The offender appeared before the Board and promised to pay stricter attention in future.

Aug. 31st, A case where solid matter was thrown into the River and reported to the West Riding Sanitary Inspector, but considered of not sufficient importance to take proceedings.

Removal of Nuisances.

At the beginning of the year 36 cases remained unabated, these together with the 153 reported make a total of 189 to be abated. The following is a summary of the abatements :—

House Drains disconnected and trapped	53
,, and other Drains opened	17
,, Drains done away with	1
,, ,, trapped	9
,, ,, ventilated	8
Drains Diverted	1
,, New, constructed	1
,, repaired	2
Sink-pipes trapped	35
Houses cleaned after notice	3
Shops ,, ,, ,, ...	1
Houses overcrowded, remedied	2
,, having water from hill-side percolating through wall	2
Cellars, sewage removed from	2
,, water removed from	6
Offensive accumulations removed	3
,, water closets abated...	4
,, ,, ,, converted	1
,, Swill Tubs removed	2
,, Piggeries	4
,, Cesspools	1
Privies, New	10
,, Converted	3
Privy Ashpits filled in	5
Total number of Nuisances remedied ...	176

Scavenging.

At the commencement of the year the District was entirely without complaints, and comparatively few have been received during the year, all of which have had immediate attention.

The following table will show the number of loads sold and removed :—

	Manure Sold.	Sanitary Depot.	Brick Company's Yard.	Loads of Rubbish Tipped.			Total.
				Bentley and Smith's Quarry.	Lane Head, Rastrick.	Other Places.	
January...	101		66	109	110		386
February.	84		95	107	48	5	339
March ...	105		77	137	46		365
April	96		61	91	48	6	302
May	94		69	114	75		352
June	92		49	144	74	1	360
July	80		38	121	113		352
August ...	88		36	140	72		316
September	94		47	139	72		352
October...	100		67	69	83		319
November	4	129	17	95	41		286
December	3	177	13	100	38		331
	941	306	635	1360	820	12	4060

No. of Pails cleaned weekly 545

The two Slaughterhouses have been satisfactory with one exception, when the floor round the drain inlet had sunk, thus preventing the water from entering the gulley when swilling.

Retail Bakehouses.—There are three places which may be termed Bakehouses, and in addition to these there are about 40 persons who bake and sell bread on a small scale.

Dairies, Cowsheds, and Milkshops Order, 1885.—There are 38 Cow keepers on the Register, and during the year all of these have been visited and 8 cases of overcrowding have been reported.

It was decided to serve seven notices to the several persons, requesting that more air space should be provided, or the number of cows reduced.

During the Summer months of this year a Course of Lectures has been delivered in the Reception Room, Town Hall, Huddersfield, under the direction of the West Riding County Council for the instruction of Sanitary Inspectors, all Inspectors holding office under them, and residing at a distance, having their railway expenses paid. These Lectures were well attended, and I can personally testify to the benefits derived from them.

Your Obedient Servant,

RALPH MARSDEN,

Sanitary Inspector.

TABLE C. 1893.

RASTRICK URBAN SANITARY DISTRICT.

MEDICAL OFFICER OF HEALTH, MEREDITH YOUNG, M.B. C.M. (Edin.)

Date of First Appointment, Oct. 1892.

,, Last Re-appointment——— Present Salary———

Term of Appointment, one year.

Rateable Value of District for General District Rate, £21,280.

Special reports presented during 1893 ... ... } Report on Epidemic of Diarrhœa, Aug. 1893.

SANITARY INSPECTOR, RALPH MARSDEN. Salary, £40.

WATER SUPPLY—

Any extension or change during 1893? No.

Portions of District inadequately supplied? None.

Cases of Lead Poisoning in 1893? None.

SEWERAGE AND SEWAGE DISPOSAL—

Extensions or Improvements during 1893? None.

EXCREMENT DISPOSAL—

Are the privy middens, &c., cleansed by sanitary staff, by contractors, or by tenants? } Sanitary Staff.

Is the present arrangement satisfactory? Yes.

BYE-LAWS, REGULATIONS, AND ADOPTIVE ACTS—

Any new Bye-laws, or Regulations for Dairies, Cowsheds, &c.? [If so, please send Copy.] } None.

What portions (if any) have been adopted of the Infectious Diseases (Prevention) Act? } The Whole.

Public Health Acts Amendment Act?

REGULATED BUILDINGS, TRADES, &c.

	Number?	General Condition?	Legal Proceedings (if any).
Common Lodging Houses	None.		
Canal Boats	None.		
Slaughter Houses	2	Satisfactory.	None.
Bakehouses	3	,,	,,
Dairies	2	,,	,,
Cowsheds	38	,,	,,
Milkshops	18	,,	,,
Offensive Trades ... ... (Please Specify Nature)	1 Soap Works.	Satisfactory.	,,

METEOROLOGICAL OBSERVATIONS (if any) taken in or near the District. None.

BIRTHS—Please state (*a*) Number of each sex, Male, 142, Female, 134.
(*b*) No. Illegitimate, 11.

DEATHS—Please state (*a*) Number of each sex, Male, 81, Female, 78.
(*b*) No. Uncertified, 9.

DEATH RETURNS—What correction (if any) is made for non-residents dying within the District ? } None necessary.

Are any Returns obtained of deaths of residents occurring in public institutions, Workhouses, Hospitals, &c.) outside the District. } Yes, in Smallpox Hospital, Clifton.

HOSPITAL FOR INFECTIOUS DISEASES—
No. of Beds, 48. Charges to Patients, *nil.*
Construction (Brick, Stone, Wood, Iron, Altered House or Cottage, &c., &c.) } Corrugated Iron and Wood.
What Diseases are admitted ? Smallpox only.

DISINFECTION. Apparatus (Steam ? Hot Air ?) Steam.
Work done in 1893. Bedding, Clothing &c. of Smallpox Cases &c., Disinfected.
Amount paid as compensation for articles destroyed, —

SANITARY WORK—
Total No. of Nuisances remaining over from 1892, 36.
Reported during 1893, 153.
Abated during 1893, 176.
Unabated at the end of 1893, 13.
Total No. of Summonses or other legal proceedings, *nil.*
House Drainage : No. of Sinks disconnected and trapped during 1893, 53.

CLOSETS. Approximate No. of each kind in District—
W.C. — Pail, Tub-C. 545. Covered Privy Middens — Uncovered Privy-Middens — .
No. of each of the above kinds constructed during 1893. New Privies, 10 ; Converted, 3 ; Privy Ashpits filled in, 5.

DESTRUCTOR— None.

What action has been taken in regard to the following matters ?—
Closure of Houses unfit for Habitation, none.
Overcrowding, 2 cases remedied.
Seizure of Unsound Food, 2 cases. Prosecutions, *nil.*
Samples taken under the Sale of Food and Drugs Acts, *nil.* Prosecutions, *nil.*
River Pollution, 2 cases, solid refuse remedied : no legal action taken.
Smoke Abatement, *nil.*

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